IN THE SPECIFICATION:

Please amend the first full paragraph on page 1 as follows:

This application is a Divisional of U.S. Patent Application No. 10/229,351, filed August 28, 2002, issued as U.S. Patent No. 6,713,807 on March 30, 2004, which is a Continuation of U.S. Patent Application No, 09/229,320 filed January 13, 1999, issued as U.S. Patent No. 6,462,371 on October 8, 2002, which claims priority to U.S. Provisional Application No. 60/109,925, filed November 24, 1998. This application is also related to U.S. Patent No. 6,162,737, issued on December 19, 2000.

Please amend the first full paragraph on page 2 as follows:

A possible mechanism by which selectivity can occur is through selective polymer formation on the protective material during etching of ~~it~~ the protective material and the sacrificial material. For instance, etching of silicon oxide and silicon nitride under conditions such as those described in U.S. Patent No. 5,286,344 can create a carbonaceous polymer on the silicon nitride which protects the silicon nitride during etching of the silicon oxide. The carbon contained in the carbonaceous polymer can originate from, for example, etchant materials, such as gas, liquid or plasma materials, including, for example, CH_2F_2 and CHF_3. When silicon oxide, such as borophosphosilicate glass (also referred to throughout the specification as BPSG), is selectively etched relative to silicon nitride, the carbon will frequently originate at least in part from etching of the BPSG. Thus, less selectivity is obtained when less BPSG is etched relative to an amount of silicon nitride exposed to the etching conditions. Accordingly, thin layers of BPSG can be more difficult to etch than thick layers. Many selective etching methods are not effective for selectively etching BPSG relative to silicon nitride when the BPSG layers have thicknesses of less than or equal to about 1.3 microns.

Please amend the first full paragraph on page 4 as follows:

A bit line **50** extends over the second insulative layer **48** and is in electrical connection with the bit line contact **46**. Accordingly, the bit line contact **46** electrically connects the bit line

50 to the node location **16**. The bit line **50** ~~can~~ may comprise, for example, aluminum, copper or an alloy of aluminum and copper.

Please amend the second full paragraph on page 4 as follows:

A method of forming the DRAM construction of **Fig. 1** is described with reference to **Figs. 2** and **3**. **Fig. 2** illustrates a semiconductive wafer fragment **10** at a preliminary processing step. The etch stop layer **32** extends over the wordlines **20**, and over the node locations **14, 16**. The insulative layer **34** extends over the etch stop layer **32**, and a patterned photoresist masking layer **60** is provided over the insulative layer **34**. The patterned photoresist masking layer **60** defines an opening **62** which is to be extended to the node location **16** for ultimate formation of the bit line contact **46** (shown in Fig. 1) therein.

Please amend the fifth full paragraph on page 4 as follows:

After the opening **62** is extended to the node location **16**, the patterned photoresist masking layer **60** (shown in **Fig. 2**) can be removed, and subsequent processing used for forming the bit line contact **46** (shown in Fig. 1) within the opening **62**. Also, similar etching described above to form the opening **62** for the bit line contact **46** can be used to form openings to the node locations **14** for formation of the capacitor constructions **36** therein. In the exemplified fabrication process, the opening **62** for the bit line contact **46** is formed prior to forming openings for the capacitor constructions **36** (shown in Fig. 1). However, other fabrication processes are known in the art wherein the openings for the capacitor constructions are formed either before, or simultaneously with, formation of the opening for the bit line contact.

Please amend the second full paragraph on page 5 as follows:

Fig. 4 illustrates a prior art problem that can occur as a result of the continued etching of the etch stop layer **32**. Specifically, the etch stop layer **32** can become thinned to an extent that the spacers **28** are exposed to the etching conditions. Such exposure can lead to etching through the spacers **28** to expose the conductive layer **26**. In a bad scenario, the conductive layer **26** is

shorted to the bit line contact **46** (shown in Fig. 1) when the conductive material of the bit line contact **46** is formed within the opening **62**. Also, the thinning of the etch stop layer **32** can lead to unpredictability during a subsequent etch of the etch stop layer **32** to expose the node location **16.** It is then unknown how long to continue a subsequent etch. If the etch continues for too long, the etch can undesirably penetrate into the substrate **12**, and possibly through the diffusion region at the node location **16**.

Please amend the first full paragraph on page 8 as follows:

As described in co-pending Application No. 09/175,051, filed October 9, 1998, now U.S. Patent No. 6,251,802, which issued June 26, 2001 (the disclosure of which is incorporated by reference herein in its entirety), the incorporation of carbon into a film can greatly reduce the etch rate of the film using an otherwise identical selective etch process. Without intending to be bound by any theory of the invention, it is believed that carbon increases the etch process selectivity by increasing the activation energy required by the etching process. An advantage of the relatively high activation energy films of the present ~~invention~~ invention, relative to the lower activation energy films of the prior ~~art~~ art, is that lower activation energy films generally require more selective processes than do higher activation energy films. As processing conditions become more highly selective, the processing conditions tend to become less stable. Accordingly, since the carbon can allow for less selective processing conditions to be used to accomplish similar results as obtained in the prior art using more highly selective processing conditions, the present invention can allow for more robust processing conditions to be used than can be used by the prior art. Also, the present invention can increase a "process window," to further increase stability of the processing conditions. In other words, the carbon incorporation of the present invention can enable a selective process to occur across a broader range of conditions than such process would occur using prior art methods.

Please amend the third full paragraph on page 9 as follows:

An etch stop layer **132** is formed over the substrate **112** and over the wordlines **120**. The etch stop layer **132** of the present invention is a film formed by combining a silicon-comprising material with a carbon-comprising material and at least one oxidizing agent. Portions of the etch stop layer **132** extend along the ~~spacer~~ spacers **128**. The etch stop layer **132** can be formed to a thickness of less than about ~~**1500**~~ 1500 angstroms, preferably less than or equal to about 500 angstroms.

Please amend the paragraph bridging pages 9 and 10 as follows:

The etch stop layer **132** can be formed by, for example, chemical vapor deposition (CVD) of a silicon-comprising material in the presence of a carbon-comprising material and at least one oxidizing agent. Preferably the silicon-comprising material is silicon nitride and/or silicon oxide. The silicon oxide can be, for example, silicon oxide or BPSG. Alternatively, the silicon-comprising material can be BTBAS. ~~Preferably the carbon-comprising~~ Preferably, the carbon-comprising material is TEOS and/or BTBAS, more preferably BTBAS. The carbon is preferably incorporated into the film in the form of silicon carbide (SiC). The oxidizing agent is preferably an oxide and/or an oxynitride, such as, for example, N_2O, O_2 and/or O_3.

Please amend the first full paragraph on page 10 as follows:

The etch stop layer **132** can be deposited, for example, in a chemical vapor deposition (CVD) reactor having a pressure of about 50 mTorr to about 10 Torr, a temperature of about 400° C to about 750° C, an SiH_4 flow rate of about 0 to about 500 sccm, an N_2O flow rate of about 0 to about 1000 sccm, an O_2 flow rate of about 0 to about 1000 sccm, and a BTBAS flow rate of about 0 to about 500 sccm, to form an etch stop layer **132** having a composition as described below.

Please amend the second full paragraph on page 10 as follows:

In another embodiment, carbon can be incorporated into the etch stop layer **132** by doping the etch stop layer **132** with carbon after deposition of the etch stop layer **132**. Doping can be conducted by methods known in the art, including, for example, ion implanting with a carbon-comprising material or vapor annealing with a~~-carbon-comprising~~ carbon-comprising material.

Please amend the paragraph bridging pages 10 and 11 as follows:

Referring to **Fig. 6**, an insulative layer **134** is formed over the etch stop layer **132** and an opening **162** is etched into the insulative layer **134** to stop at the etch stop layer **132**. The insulative layer **134** can comprise, for example, BPSG. The opening **162** is defined by, for example, a patterned photoresist masking layer, as described in reference to **Fig. 2** above. The sides of the opening **162** are aligned with portions **118** of the etch stop layer **132** that extend along the~~-spacer~~ spacers **128**. The insulative layer **134** and opening **162** can be formed by methods discussed in the background section of the specification. The carbon incorporated in the etch stop layer **132** can greatly increase the selectivity of the etch of the insulative layer **134** relative to the etch stop layer **132**. Such selectivity can decrease the risk of the prior art over-etch problems illustrated in **Fig. 4**. The decreased risk of over-etch problems accomplished by carbon incorporation in the etch stop layer **132** allows the etch stop layer **132** to be formed thinner than the etch stop layer **32** used in the prior art. Accordingly, there can be more space above the etch stop layer **132** for circuit constructions. Also, the incorporation of carbon in the etch stop layer **132** allows for etch selectivity to be obtained even if the insulative layer **134** is very thin before the etch. For example, the insulative layer **134** can be less than 1.3 microns thick before the etch and etch selectivity can still be obtained. Additionally, the incorporation of carbon in an etch stop layer that comprises silicon and oxygen provides an etch stop layer with a lower dielectric constant.

Please amend the first full paragraph on page 11 as follows:

After the selective etch to expose the etch stop layer **132**, further processing can be used to extend the opening **162** to the node location **116**. Such further processing can include a silicon nitride etch, such as, for example, hot phosphoric acid.

Please amend the second full paragraph on page 12 as follows:

The spacers **228** extend along the sidewalls of the wordlines **220**. The cap layer **230** overlays the conductive layer **226** of the wordlines **220**. The spacers **228** and cap layer **230** are a film formed by combining a silicon-comprising material with a ~~carbon-comprising~~ carbon-comprising material and at least one oxidizing agent. Preferably the silicon comprising material is silicon nitride and/or silicon oxide. The silicon oxide can be, for example, silicon oxide or BPSG. Alternatively, the silicon-comprising material can be BTBAS. Preferably the carbon-comprising material is TEOS and/or BTBAS, more preferably BTBAS. The carbon is preferably incorporated into the film in the form of silicon carbide (SiC). The oxidizing agent is preferably an oxide and/or an oxynitride, such as, for example, N_2O, O_2 and/or O_3.

Please amend the third full paragraph on page 12 as follows:

The ~~spacer~~ spacers **228** and cap layer **230** can be formed, for example, by chemical vapor deposition (CVD) using the reaction conditions described above for the etch stop layer **132** of the present invention.

Please amend the fourth full paragraph on page 12 as follows:

In another embodiment, carbon can be incorporated into the ~~spacer~~ spacers **228** and/or cap layer **230** by doping the ~~spacer~~ spacers **228** and/or cap layer **230** with carbon after deposition of the ~~spacer~~ spacers **228** and/or cap layer **230**. Doping can be conducted by methods known in the art, including, for example, ion implanting with a carbon comprising material or vapor annealing with a carbon-comprising material.

Please amend the fifth full paragraph on page 12 as follows:

In the present invention, the spacer and/or cap layer comprises silicon, carbon and oxygen, and, optionally, nitrogen. In one embodiment, the spacer and/or cap layer can comprise about 20% to about 65% by weight silicon, about 2% to about 20% by weight carbon, about 5% to about 75% by ~~weighs:~~ <u>weight:</u> oxygen and about 0% to about 30% by weight nitrogen.

Please amend the fourth full paragraph on page 13 as follows:

An opening **262** is etched through insulative layer **234** and to the substrate **212**. The opening is defined by, for example, a patterned photoresist masking layer, as described above in reference to **Fig. 2**. The opening **262** is aligned relative to the spacer **228** proximate the substrate **212**. In one embodiment, the insulative layer **234** comprises BPSG and the ~~spacer~~ <u>spacers</u> **228** and cap layer **230** comprise silicon nitride. In this aspect of the invention, a first silicon oxide layer (BPSG insulative layer **234**) is etched selectively relative to a second silicon nitride layer (the layer of one or more of the spacers **228** and/or cap layer **230**) by virtue of the carbon that has been incorporated/ doped into the second layer that comprises silicon and oxygen.

Please amend the second full paragraph on page 14 as follows:

Even if an etch stop layer is present, the spacers **228** can be thinner than the prior art spacers **28** to provide additional room for capacitor constructions. Specifically, a function of the prior art spacers **28** can be to provide a barrier in the event that etch stop layer **32** is etched through during processing to form opening **62**. As the spacers **228** of the present invention are more resistant to etching than the prior art spacers **28**, the spacers **228** can be formed thinner than prior art spacers **28** and still form an effective barrier against etch-through. For instance, prior art spacers **28** would typically be formed to a thickness of at least about ~~**900**~~ <u>900</u> angstroms (the "thickness" being defined as an amount by which the spacers extend outwardly or horizontally from the sidewalls of the wordlines). The spacers **228** and/or cap layer **230** of the present

invention can be formed to a thickness of less than or equal to about 500 angstroms, preferably less than or equal to about 100 angstroms. The thinner spacers **228** can provide additional room for capacitor construction relative to the room available for capacitor construction in the prior art. Additionally, the incorporation of carbon in the films that comprise silicon and oxygen provides spacers and cap layers with a lower dielectric constant.

Please amend the second full paragraph on page 15 as follows:

~~A~~ An etch-resistant film was prepared in a chemical vapor deposition (CVD) reactor under the following conditions: a pressure of about 500 mTorr, a temperature of about 575° C, an N_2O flow rate of about 50 sccm, an O_2 flow rate of about 50 sccm, and a BTBAS flow rate of about 125 sccm. The resulting film had a stoichiometric composition of $SiO_{1.4}N_{0.2}C_{0.1}$, and a thickness of about 1040 angstroms.

Please amend the third full paragraph on page 15 as follows:

An etch-resistant film was prepared in a chemical vapor deposition (CVD) reactor under the following conditions: a pressure of about 500 mTorr, a temperature of about 575° C, an N_2O flow rate of about 150 sccm, and a BTBAS flow rate of about 125 sccm. The resulting film had a stoichiometric composition of $SiO_{1.3}N_{0.5}C_{0.3}$ and a thickness of about 630 angstroms.